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**SYSTEM AND METHOD FOR RAPID OPTIMIZATION OF CONTROL  
PARAMETERS OF AN IMPLANTABLE CARDIAC STIMULATION DEVICE**

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**Abstract of the Disclosure**

- 10 Techniques are provided for rapidly optimizing control parameters of  
pacemakers or implantable cardioverter defibrillators. Briefly, the heart is  
paced using different sets of control parameters during a sequence of  
consecutive short evaluation periods of equal duration, which each last only  
about 5 - 12 seconds. Transient cardiac performance is monitored during  
15 each of the short evaluation phases and optimal parameter settings are then  
estimated based on changes in the transient cardiac performance from one  
parameter setting to another. By using a series of consecutive short  
evaluation periods of equal duration, rather than switching between short  
test periods and longer baseline periods, the overall duration of the test can  
20 be reduced as compared to predecessor techniques that require long  
intervening baseline periods.